FINDING OF NO SIGNIFICANT IMPACT
FOR THE TOWN OF COLUMBUS
HERITAGE WELL PUMPHOUSE AND WELL PUMP PROJECT

TO: ALL INTERESTED PERSONS

Date: January 27, 2009
Action: Connecting a new well to the Columbus water system
Location of Project: Columbus, Montana
DWSRF Funding: $365,000
Total Project Cost: $365,000

An environmental review has been conducted by the Montana Department of Environmental Quality for the proposed improvements to the water system in Columbus. The purpose of the project is to make improvements to the city's water system that are needed to ensure an adequate supply of water necessary to protect public health.

The affected environment will primarily be within the town's Heritage Park and street right-of-way. The human environment affected will include Columbus and the surrounding area. Based on the information provided in the references below, the project is not expected to have any significant adverse impacts upon terrestrial and aquatic life or habitat, including endangered species, water quality or quantity, air quality, geological features, cultural or historical features, or social quality.

This project will be funded in part with a low-interest loan from the Montana Drinking Water State Revolving Fund (DWSRF) Program, administered by the Montana Department of Environmental Quality and the Montana Department of Natural Resources and Conservation.

The Department of Environmental Quality utilized the following references in completing its environmental review of this project:

- Uniform Application for Montana Public Facility Projects, Heritage Park Water Supply Well, April 2007, prepared by Western Groundwater Services, Bozeman, Montana.
- Heritage Park Wells Construction and Testing Report, Town of Columbus, Montana, December 2007, prepared by Western Groundwater Services, Bozeman, Montana.
- Draft Project Manual, Heritage Well Pumphouse and Well Pump for Town of Columbus, Montana, October 2008, prepared by Interstate Engineering, Billings, Montana.

In addition to these references, letters were sent to the Montana Department of Fish, Wildlife and Parks, the Montana Department of Natural Resources and Conservation, the Montana Department of Environmental Quality, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the Montana State Historic Preservation Office.

Responses were received from the U.S. Army Corps of Engineers, the Montana Department of Fish, Wildlife and Parks, the Montana Department of Environmental Quality and the Montana State Historic Preservation Office. These references are available for review upon request by contacting:

Gary J. Wiens, P.E.
Department of Environmental Quality
P.O. Box 200901
Helena, Montana 59620-0901
Phone: (406) 444-7838
Email: gwiens@mt.gov

Ronald Barndt
Clerk
Town of Columbus
P.O. Box 549
Columbus, Montana 59019
rbarndt@cablemt.net

Comments on this finding or on the environmental assessment may be submitted to the Department of Environmental Quality at the above address. Comments must be postmarked no later than March 16, 2009. After evaluating all substantive comments received, the department will revise the environmental assessment or determine if an environmental impact statement is necessary. Otherwise, this finding of no significant impact will stand if no substantive comments are received during the comment period or if substantive comments are received and evaluated and the environmental impacts are still determined to be non-significant.

Signed,

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Todd Teegarden, Chief
Technical & Financial Assistance Bureau

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TOWN OF COLUMBUS
HERITAGE WELL PUMPHOUSE AND WELL PUMP PROJECT

ENVIRONMENTAL ASSESSMENT

I. COVER SHEET

A. PROJECT IDENTIFICATION

Applicant:	Town of Columbus
Address:	P.O. Box 549
	Columbus, MT 59019
Project Number:	Not yet assigned

B. CONTACT PERSON

Name:	Dennis Holten, Director of Public Works
	Town of Columbus
Address:	P.O. Box 549
	Columbus, MT 59019
Telephone:	(406) 322-4424

C. ABSTRACT

The Columbus water system provides potable water to a population of approximately 1748. Water is currently obtained from two groundwater sources. The Beartooth Well provides 650 gallons per minute, whereas the Island Infiltration Gallery supplies 300 gallons per minute. State water supply standards require that the sources of supply meet the maximum day demand with the largest well out of service. To meet this requirement now and in the future, it is necessary to develop and connect an additional source of supply to the water system. The Heritage Park Well is expected to supply 360 gallons per minute; the addition of this groundwater source would bring the total available supply to 1310 gallons per minute. With the largest source out of service the system could provide 660 gallons per minute, which exceeds the present maximum daily demand of 550 gallons per minute.

The proposed water system improvements will enable the town to maintain compliance with the Safe Drinking Water Act and will ensure that an adequate supply of drinking water meeting state and federal regulations will continue to be safely and reliably provided to all consumers.

The project will be funded in part by a Drinking Water State Revolving Fund loan. Environmentally sensitive characteristics such as wetlands, floodplains and threatened or endangered species are not expected to be adversely impacted as a consequence of the proposed project. No significant long-term environmental

impacts were identified during the preparation of this document.

D. COMMENT PERIOD

Thirty calendar days.

II. PURPOSE AND NEED FOR ACTION

A. EXISTING FACILITIES

The two sources of water supply, the Beartooth Well and the Island Infiltration Gallery, are in good condition and considered reliable. During low water conditions in the Yellowstone River, the pumping rate from the Island Infiltration Gallery is impacted. Both sources are chlorinated.

The town's storage tank provides 1 million gallons of storage for peak demands and fire flows. The distribution system consists of asbestos cement, cast iron and polyvinyl chloride pipe ranging in diameter from 4 inches to 16 inches. The low number of customer complaints and the results of hydraulic modeling suggest that the storage and distribution system is performing adequately under existing conditions.

B. PROPOSED PROJECT

The proposed project includes the following components:

1. Furnishing and installing a new submersible well pump,
2. Construction of a new pump house and sand removal system, and
3. Connection to the town's water distribution system.

By constructing these improvements, the town will ensure that an adequate quantity of safe water will continue to be delivered to the users of the system and public health and safety with respect to the water supply will be ensured.

III. ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. WATER SUPPLY ALTERNATIVES

Several alternatives for addressing the town's water supply needs were considered:

1. NO ACTION – This alternative was considered unacceptable since it would perpetuate potentially unsafe conditions within the water system. Failure to increase the town's water supply could result in events that threaten public health and safety.

2. GROUNDWATER BY VERTICAL WELL ALTERNATIVE – This

alternative, the proposed action, was selected from the options identified in the town's April 2007 Heritage Park Well preliminary engineering report. The town drilled a test well in 2002, followed by two production wells in 2007. The first production well will not be used because of excessive sand production. The second well produces satisfactory water and meets the water quality requirements of the Department of Environmental Quality.

3. SURFACE WATER – Surface water could be extracted by horizontal collector well, infiltration gallery or direct intake from the Yellowstone River. Construction of a water treatment facility would be necessary in order to meet state and federal regulations governing the provision of drinking water.

4. RECLAIMED WASTEWATER EFFLUENT – This alternative was rejected because of its high cost relative to the other options.

B. COST COMPARISONS

Table 1 provides a cost comparison of alternative approaches to increasing water supply for the town.

Table 1. Alternative Cost Comparison

Source of Supply	Capital Cost for Facility
Groundwater by Vertical Well	$330,000
Surface Water	$1,040,000
Reclaimed Wastewater Effluent	$2,080,000

Although estimated costs have increased since this analysis was performed, the first alternative is clearly the most economical alternative for increasing the town's water supply.

In addition to the capital cost advantages, the preferred alternative of developing a vertical well at the Heritage Park site has the following advantages:

1. Good water quality and yield potential,
2. Greater feasibility of obtaining water rights,
3. The property is owned by the town,
4. Operation and maintenance costs are lower,

5. Environmental impacts are expected to be minimal due to the short construction duration and small footprint of the wellhouse.

C. TOTAL ESTIMATED COSTS

The revised estimated total cost of the proposed project is $365,000, based on construction of the preferred alternative. The town anticipates receiving a Drinking Water State Revolving Fund loan of $365,000, with the loan reserve funded by the town. Base monthly water rates are expected to increase from a current level of $8.28 to $9.94 to adequately fund the improvements to the town's water system.

IV. AFFECTED ENVIRONMENT

A. PLANNING AREA

The town of Columbus is located in Stillwater County, 40 miles west of Billings, along Interstate 90. According to the 2000 census, the town had 1748 people and 762 housing units, 709 of which were occupied. The median household income in the town was $33,750 and the median family income was $46,103.

Construction of the proposed project is expected to begin in the spring of 2009 and take approximately three months. Construction is expected to affect primarily the immediate vicinity of the proposed wellhouse within Heritage Park. Some excavation in the town's street right-of-way will be necessary to connect the well to the water distribution system.

B. FLOW PROJECTIONS

Based on water production records for 2005, the town's average water demand is 396,000 gallons per day, or 275 gallons per minute. Applying a peaking factor of two, the maximum day demand is 550 gallons per minute. The two existing water sources can provide 950 gallons per minute. However, if the Beartooth Well is removed from service, the other source, the Island Infiltration Gallery, cannot meet the maximum daily demand required by state regulations. For this reason, a third water source is needed. In the future, as water demand increases, a fourth and possibly fifth well may be needed to keep up with increasing demands.

C. NATURAL FEATURES

Columbus is located along the Yellowstone River near its confluence with the Stillwater River. Topography of the planning area consists of nearly level to gently sloping flood plains and alluvial fans. Typical soils are loams, with some silt, clay or sand present. Prior to disturbance, native vegetation was mainly western wheatgrass, green needlegrass, threadleaf sedge, prairie junegrass, annual forbs and woody plants.

The climate of Columbus is characteristic of the semiarid high plains of south-central Montana. Maximum precipitation occurs in May and June, with another peak in September and October. Personnel from Rimrock Engineering, Inc. performed a geotechnical investigation at the site of the proposed wellhouse and found no groundwater in soil excavations conducted to depths of 17 feet.

None of the project area lies within the 100-year floodplain, as defined by the Federal Emergency Management Agency maps.

The U.S. Fish & Wildlife Service identifies seven species in Montana as endangered and seven species as threatened. The endangered animal species include the whooping crane, Eskimo curlew, black-footed ferret, pallid sturgeon, white sturgeon, least tern and gray wolf. Threatened animal species in the state include the grizzly bear, Canada lynx, piping plover and bull trout. Threatened plant species are the Spalding's catch-fly, water howellia and Ute Ladies'-tresses. Additionally, three animal species, the warm springs beetle, yellow-billed cuckoo and arctic grayling, and one plant species, the slender moonwort, are listed as candidate species for a threatened or endangered designation.

All construction will take place on the site of the town's Heritage Park or within public street right-of-way. No native vegetation is expected to be disturbed by the construction. Similarly, the construction sites do not provide prime habitat for wildlife, and as a result, no impacts on wildlife are anticipated.

V. ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

A. DIRECT AND INDIRECT ENVIRONMENTAL IMPACTS

1. Housing and Commercial Development – Developed land use within the town limits is a mix of residential and commercial. Although intended to accommodate some anticipated growth, the proposed improvements are not expected to have an impact on housing and commercial development.

2. Future Land Use – No adverse impacts to land use are expected from the proposed project.

3. Floodplains and Wetlands – None of the project area lies within the 100-year floodplain. No wetlands have been identified on the proposed construction site.

4. Cultural Resources – The construction site is previously-disturbed land. The town's consultant solicited comments from Damon Murdo of the State Historic Preservation Office, who responded in an August 27, 2006, letter, "there is a low likelihood cultural properties will be impacted by the construction." and "a cultural resource inventory is unwarranted at this time."

5. Fish and Wildlife – No impacts on biological resources in the area are anticipated by the proposed project.

6. Water Quality – Any impacts on water quality are expected to be minor and short-term. Short-term impacts on surface and groundwater quality can be controlled through proper construction practices.

7. Air Quality - Short-term negative impacts on air quality may occur from heavy equipment, dust and exhaust fumes during project construction. Construction practices and dust abatement measures will be implemented during construction to control dust, thus minimizing this problem.

8. Public Health – The proposed project is not expected to have adverse impacts on public health, and should instead enhance public health by increasing water quantity and reliability.

9. Energy - During construction of the proposed project, additional energy will be consumed, causing a direct short-term impact on this resource.

10. Noise - Short-term impacts from increased noise levels may occur during construction of the proposed project improvements. Construction activities are anticipated to occur for three months during daylight hours only.

B. UNAVOIDABLE ADVERSE IMPACTS

Short-term construction-related impacts, such as noise, dust and traffic disruption, may occur, but can be minimized through proper construction management. Energy consumption during construction cannot be avoided. No permanent direct, indirect or cumulative adverse impacts are anticipated as a result of the proposed action.

VI. PUBLIC PARTICIPATION

A public meeting was held by the town on December 3, 2007, to consider the proposed work on the water system. No substantive objections were raised during the meeting.

VII. REFERENCE DOCUMENTS

The following documents were used in the environmental review of this project and are considered part of the project file:

A. Uniform Application for Montana Public Facility Projects, Heritage Park Water Supply Well, April 2007, prepared by Western Groundwater Services, Bozeman, Montana.

B. Heritage Park Wells Construction and Testing Report, Town of Columbus, Montana, December 2007, prepared by Western Groundwater Services, Bozeman, Montana.

C. Draft Project Manual, Heritage Well Pumphouse and Well Pump for Town of Columbus, Montana, October 2008, prepared by Interstate Engineering, Billings, Montana.

VIII. AGENCIES CONSULTED

The following agencies were contacted regarding the proposed construction of this project:

A. The Montana Department of Fish, Wildlife and Parks was asked for comments on the proposed project. In an emailed response dated October 25, 2006, Andy Brummond, Instream Flow Specialist, noted that in recent years Yellowstone River flows have routinely dropped below the instream flow reservation in August and September. He cautioned against acquiring a junior water right that could be called when municipal demand is at its highest. As an alternative, he noted that the town already has a senior water right for municipal water from the Yellowstone River. He urged the town to consider requesting a change in point of diversion for this existing senior water right rather than applying for a new water right permit that would be subordinate to instream flows.

B. The U.S. Fish and Wildlife Service was asked in an August 5, 2006, letter sent by the town's consultant for comments on the proposed project. The agency did not respond to the request for comments.

C. The U.S. Army Corps of Engineers reviewed the proposed project and commented in a letter dated September 28, 2006. The Corps of Engineers is responsible for administering Section 404 of the Clean Water Act, which regulates the excavation or placement of dredged or fill material below the ordinary high water mark of the nation's rivers, streams, lakes or in wetlands. Cathy Juhas of the Corps of Engineers wrote that a Section 404 permit would be required if the construction activities involve any work in the waters of the United States. No such work is anticipated as part of this project.

D. The Montana Historical Society's Historic Preservation Office reviewed the project and, in a letter dated August 22, 2006, responded, "We feel there is a low likelihood cultural properties will be impacted. We, therefore, feel that a recommendation for a cultural resource inventory is unwarranted at this time. However, should cultural materials be inadvertently discovered during this project we would ask that our office be contacted and the site be investigated." The construction contract will include provisions for the immediate cessation of work and contact with the Historic Preservation Office in the event any cultural resources are identified during construction.

E. The Montana Department of Natural Resource and Conservation was asked in an August 5, 2006, letter sent by the town's consultant for comments on the proposed project. The agency did not respond to the request for comments.

F. The Permitting and Compliance Division of the Montana Department of Environmental Quality was asked in an August 5, 2006, letter for comments on the proposed project. Jamesa L. Dodd of the Water Protection Bureau responded with information on the requirements of the state's Water Quality Act. The construction documents will contain language addressing the acquisition of and compliance with the necessary water quality permits.

IX. AGENCY ACTION, APPLICABLE REGULATIONS AND PERMITTING AUTHORITIES

The town must have approval from the Department of Environmental Quality to construct and operate the water system improvements outlined in this environmental assessment. In addition, the proposed action may require other permits that must be obtained by the town's construction contractor, as described in the project manual approved by the department. The contractor will be required to submit the necessary documentation, including a notice of intent and storm water pollution prevention plan, to the department's storm water permitting program prior to beginning construction.

X. RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS

❑ EIS ❑ More Detailed EA ❑ No Further Analysis

EA prepared by:

_____ _____

Name Date

EA reviewed by:

_____ _____

Name Date

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